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A DNA Genealogy Solution to the Puzzle of Ancie Look-Alike Ceramics across the World

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A puzzling similarity has been observed in some of the ceramics and figurines in several cultures in Eastern Europe (the Trypillia-Cucuteni culture, 6500 - 5500 years before present [ybp]), Thailand (the Ban-Chiang culture, between 7400 and 3800 ybp), China (the Yangshao culture, between 8000 and 4000 ybp), North America (the Anasazi-Mogollon culture, between 7500 ybp and present time). It is remarkable that the ceramics of these four cultures match each other in 17 (45%) of the 38 indicators used to distinguish archeological ceramic piece in the comparative research. Remarkably, all four cultures with look-alike ceramics also use the swastika as a common symbol. We advance the hypothesis that all four cultures are connected by the Aryan (bearers of R1a) migrations between 5500 and 3000 ybp. While the Aryan migrations in Eurasia are well verified by DNA data, those in the Americas are not known as yet. Consideration of R1a haplotypes among Native Americans do not conflict with the hypothesis.

Keywords: Y-Chromosome; Mutations; Haplotypes; Haplogroups; SNP; Ceramics; Trypillia-Cucuteni; Ban-Chiang; Yangshao; Anasazi-Mogollon; Aryan Swastika

Introduction

This paper aims to explain a puzzling similarity in ceramics excavated from four Neolithic cultures and described in detail in Mironova (2013). The archaeological cultures, all agricultural, are:

- in Europe, the Trypillian, or Trypillia-Cucuteni culture, 6500 - 5500 years before present (ybp), northwest from the Black Sea, and between the rivers Dnestr on the West and Dnepr on the East
- in North-East Thailand, the Ban-Chiang culture, near the border with Laos, 7400 - 3800 ybp
- in China, the Yangshao culture, in the Huang He (Yellow River) basin, 8000 - 4000 ybp
- in North America, the Anasazi-Mogollon culture, located in Arizona, Utah, New Mexico, and Colorado, 7500- the present.

The dates given here are for the cultures, not for the ceramics, which—if dated at all—are often not reliably dated. All the cultures are ancient; the Trypillian culture, which belongs to the Proto-Slavic region of Vincha-Tordosh-Keresh-Cucuteni-Trypillia cultures of 8000 - 5000 ybp, reveals some similarity with ceramics and other artifacts of the Mesolithic Lepenski Vir culture in Serbia, dated at least 9400 - 8200 ybp using strontium isotope measurements (Boric & Price, 2013).

It is remarkable that these cultures—separated by thousands of miles—designed ceramics and figurines that bear similarities that cannot be regarded as accidental.

Features by which the Ceramic Artifacts Were Compared

The features by which we assessed the ceramics were assigned according to 38 features referred to tec function and ornament, the latter was based on Golan (1991). We have found 17 similarities (ceramics of the said four cultures. Remarkably, with look-alike ceramics also use the swastik symbol. The 17 similarities include the techn ics-making using clay ribbons (without pott polishing instruments, and finishing the surfa kets, bast texture, engobe coating. Besides, th mon shapes and ornaments (designs, images, lows: spoons with similar ornaments, anthropo Great Goddess figure, Great Goddess face, dess"/volute sign, "eye" sign, Triglav (triskelio spiral, "Seeded soil" sign, triangles, S-shape o sign, apparent calendar functions of the vessel common characteristics were not mentioned i such as swastika, "Tausen" symbol, figurine ornament, such as mouth open, position of ar posed genitals. Most of similarities are in the categories. Not all similarities are shown in th paper, for more detailed comparisons the read (Mironova, 2013) containing more than 140 illu

Let us consider some examples.

Great Goddess Images and Fig

Certain patterns on ceramic vessels and on f agricultural civilizations are referred to in cont ture as "images of the Great Goddess". Typi Goddess is drawn from broken lines; she has with spread limbs. This pattern occurs frequen

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of the European Cucuteni-Trypillia and the Chinese Yangshao archaeological cultures (**Figure 1**).

The pattern, which resembles a human figure, follows certain rules: the "body" is drawn as a rectangle with a central red line; the limbs also have a central red line. In fact, these patterns are not really so much images as they are symbols. Often, the pattern has no head, or replaces the head with other symbols (see below).

In the four cultures we are considering, this Great Goddess image has been strikingly consistent through seven or eight millennia, and it occurs thousands of miles apart. We see it in the Anasazi-Mogollon cultures (**Figure 2**).

In China, in the Majiayao-Yangshao culture, 2300-2050 BC (**Figure 3**), we see a head of the Great Goddess on ceramics pieces a thousand years older than an American pot with a similar motif. In **Figure 3**, we see not only a head but a symbol built into it; this symbol is called "Seeded soil".

One pose of the Great Goddess reflects childbirth. It is found on many images, including those from the Lepenski Vir culture in the Balkans. In **Figure 4** the Lepenski Vir Idol (upper (b)) is paired with an embossed female figure (a) from Yangshao-Machang culture; the two figures have arms and legs in nearly identical positions.

Similar images of the Great Goddess are spread from the Balkans to South East Asia, and strikingly similar figurines are found in pre-Columbian cultures in America (**Figure 5**).

Most of the figurines hold their hands on the stomach, and in all of them the mouth is open. All expose genitals, most of them have a symbol in a form of a letter M (or or drawn in the collarbone area [not seen in the their small size, the reader is referred to (Mir seems that Great Goddess figurines followed a

(a) (b)

Figure 1.
A vessel with the symbolic image of the Great Goddess from Cucuteni (a); a very similar image of the Great Goddess on the vessel from Yangshao (b).

(a) (b)

Figure 2.
Image of the Great Goddess. Anasazi culture (a). Mogollon culture (b), 1000-1150 BC, North America.

(a)

(b)

Figure 3.
Vessel from China (Yangshao) Gansu, culture M phase, 2300-2050 BC. The image below is a close-up

Triskelion (Triglav)

The Triskelion, or Trinity, or Triglav (the symbol is often seen on ceramics in the cul above (e.g., **Figure 6**).

The Triglav sign in the both illustrations is with any additional symbols. It is presented form, with curved, spiral ends.

Figure 7 shows plates from the Chinese M American Anasazi cultures, both with the accompanied with other early agricultural sy bears a double spiral in the center along with repeated many times along the plate's rim, the three disks filled with dots (the Seeded soil birds around them (apparently, a sign of trip God).

A vessel from the Ban-Chiang culture (Tha pattern of Triglav as an isosceles triangle, forn bons as red lines (distinctive feature of Ban- logical culture). According to Golan, (1991), three dots descends from the Great Goddess sy gle is a cloud, the three circles are the symb God). One can also see a spiral, a symbol of Neolithic civilizations, near the base of triangle

These symbols are generally interpreted as continuous development—a spiral, 2) vigila sustainable harvest—the Seeded soil pattern. triad of birth, life, and death (Golan, 1991). symbolize the three phases of the agricultura growing, harvesting.

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(a) (b) (c)

Figure 4.
Upper (a) a Chinese vessel (Yangshao-Machiang) with embossed female image. Upper (b) the Lepenski Vir Idol, 7th millenniu from Ban-Chiang, late stage, 300 BC-200 AD.

(a) (b)

Figure 5.
(a) an Indian idol from the Appalachians, Cherokee, North Carolina.
(b) a female figure from Arizona.

(a) (b)

Figure 6.
(a) A plate from the East European Cucuteni culture with the Triglav sign; (b) A plate of the American Indian culture Hohokam (the Anasazi-Mogollon).

(a) (b

Figure 7.
(a) The Triglav image on a plate of the Neolithic (China); (b) Stylized Triglav sign on a plate from Ar

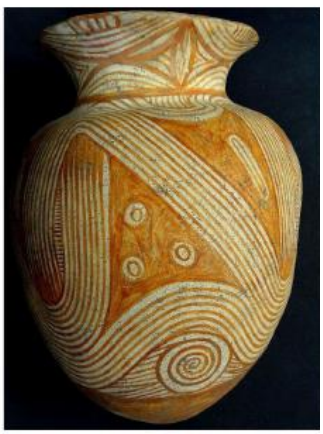

Figure 8.
A vessel from Ban-Chiang culture with the Triglav sign.

Tausen

The "Tausen" symbol, which is apparently related to harvesting, has been identified on clay seals of the Trypillia/Cucuteni and the Ban-Chiang cultures (**Figure 9**).

Figure 10 shows similar Tausen pattern in tl lture.

The Tausen sign is common in the Anasazi-M in America (**Figure 11**).

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(a) (b)

Figure 9.
Seals from Cucuteni (a) and Ban-Chiang (b).

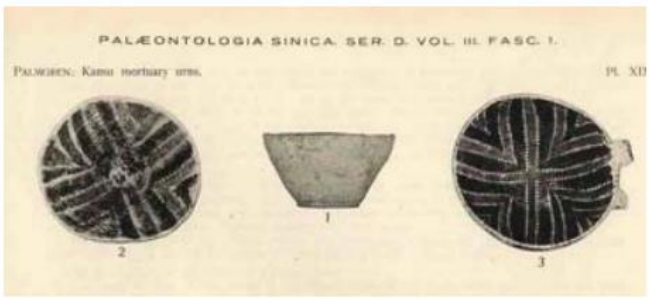


Figure 10.
The "Tausen" sign on ceramics from Yangshao.

Commonly, the Tausen pattern is used on concave shapes, on plates and cups in particular. It might have been connected with the richness of the harvest (see also **Figure 12**).

Discussion

A DNA-Genealogy-Based Hypothesis

How do we explain the presence of look-alike ceramics and figurines in four distinct and widely separated archeological sites?

Two answers have been predicated:

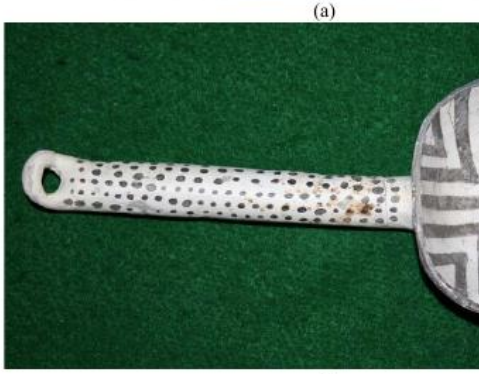
1) The artifacts are random in their origin; all similarities are accidental.

2) The artifacts are products of similar design, technology, and symbol. In other words, they have a common source.

The first statement is unlikely. So, let us consider possible explanations for the similarities of artifacts which are so distinct in geography. A possible explanation is that an ancient culture initiated certain ceramic designs and patterns, and that cultures in Eastern Europe, China, Thailand, America are "derivative" or "descended" from the designs of that ancient culture. This connection could be the result of physical migrations, or demic diffusion. The idea of diffusion from Europe or China to the New World is the most difficult to imagine. But here, DNA becomes useful. If the basic features of a set of artifacts were initially created as an "intellectual property" by an ancient tribe, is it possible to trace the creating tribe using Y-chromosomal haplogroups? When and where did the creative tribe live when the ceramic designs and symbols were being shaped? Do we know about migrations of any tribe or haplogroup which had connections to Eastern Europe, China, Thailand, and America many thousands of years ago?

A preliminary answer is yes. We do know of a haplogroup which migrated from East Europe to South-East Asia, and—in some conjectural accounts—from China and Europe to America. According to the work of Klyosov (2009a) and Klyosov

(a)



(b)

Figure 11.
The sign "Tausen" on a plate from the Mogollon cult
and on a spoon from the Anasazi (b).

and Rozhanskii (2012), haplogroup R1a arose approximately 20 thousand years before the pr long migration westward, (via Tibet, Hindus plateau, Anatolia) and arrived in the Balkans a ybp. This is seemingly the Lepenski Vir cult ropeoid (Caucasoid) excavated skeletons, and isotopes datings (see above). Among the chair rivative cultures we see Trypillia-Cucuteni of (The R1a-Z93 subclade (South Eastern branch) its concurrent Z283 subclade (Eurasian branch 5500 ybp (Rozhanskii & Klyosov, 2012), an eastward from Europe to the Russian Plain an Altai, Mongolia, China. Skeletal remains of the were excavated 3000 kilometers east of U slightly north of Mongolia and China, dated 3 (Keyser et al., 2009). The remains were identif to the R1a-Z93-L342.2-L657 subclade (Klyos came to India and Iran about 3600 ybp. Al might have migrated from Europe eastward 5(even before that, and contributed to the Afan the Altai area, which overlaps the present c Chinese Altai regions, north of the Tarim basir connection of R1a bearers to East Europe a explain the penetration of ceramics and figur the Trypillian culture to the South East Asi Ban-Chiang culture could have borrowed the and figurines from China. This art and craftsma have been brought to China and Thailand with 4000 - 3500 years ago, via the Andronovo cu R1a, no other haplogroup could have connecte

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Figure 12.
Cup with the "Tausen" sign from the Yangshao culture, China.

Figure 13.
The map of swastika as a characteristic feature of ancient cultures (Thomas Wilson, Curator, Department of Prehistoric Anthropology, US National Museum. 1894).

and China/Thailand. Haplogroup I is absent in South-East Asia, as is haplogroup R1b; haplogroups O and C are absent in Europe, as are South-East Asian haplogroups N, and D.

A more difficult task is to build North America into the migration system we have posited. In addition to the Great Goddess, the Triglav, and the Tausen symbols used in Anasazi-Mogollon ceramics, the swastika is often used (**Figure 13**). A skeptic might say that the swastika could have been introduced randomly in South America among Maya, and in North America, in Navajo and Anasazi tribes, and in other tribes in the Americas, and among the Aryans, and in Trypillia-Cucuteni, and in Ban-Chiang culture. However, that degree of pure accidents is next to impossible, particularly when accompanied with similar ceramics.

Swastika as an Argument of the Aryan Culture and Their Descendants

Thomas Wilson, in his study of the swastika (1894), discussed a multitude of swastika images from various excavations, including swastikas of the Etruskans, swastikas of Indians in Hindustan, swastikas in Latin America (Maya, Nicaragua and others), swastikas of native Americans from what is now known as Ohio, Arkansas, and Kansas. How the swastikas got to all these places is something of a mystery.

Looking at the map in **Figure 13**, one can see that most of

(a) (b

Figure 14.
Swastika on a plate from the Trypillia culture (a). Th W (or M) sign, which is known on ceramics of th Lepensky Vir cultures. Swastika on a vessel of the China (b).

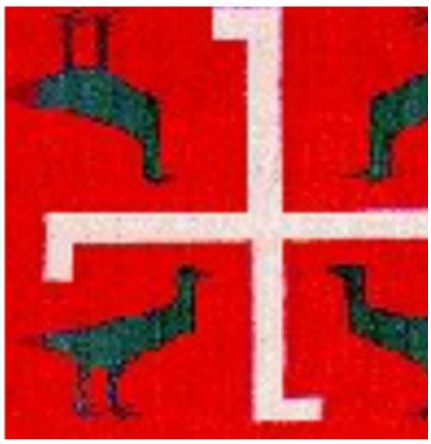

Figure 15.
Swastika of Navajo tribe in America.

the marks there are related to already known (or military expeditions) of R1a bearers betwee ybp. This includes the routes from Europe to China. It includes travels to Scandinavia, Ice neighboring Greenland), Mesopotamia, the M Arabian Peninsula, and Egypt, but not southw addition, the map shows swastika images in I America. Could R1a bearers have arrived in Ar times? Legends and myths about pre-Christ travels to America abound. There are legends a who allegedly reached shores of America (Jon are legends about the lost fleet of Alexander might have reached America (Gladwin, 1947; I There are legends that Chinese explorers ma America (de Guignes, 1761; Menzies, 2004). T not scholarly, but we should keep them in min sider R1a among native Americans (see below)

Figures 14-17 show swastikas in the Trypil Anasazi, and Mogollon ancient cultures, and i the last three in America.

The swastika has accompanied the Aryans their migrations from the Russian Plain to Ind Middle East (**Figure 18-20**). The swastika was Russia until it was chosen by Nazis as their n the 1930s. Even traditional Russian lace whicl for centuries with a swastika ornamentation (was stopped in the 1930s.

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Figure 16.
Swastika on a spoon from the Anasazi culture.

(a) (b)

Figure 17.
Swastika on a vessel from the Anasazi culture (a) and on a plate from the Mogollon culture (b).

Figure 18.
Swastika on the Vologda lace, a traditional Russian ornament for millennia until the 1930s.

R1a in America

Since the bearers of the R1a haplogroup used swastikas commonly, and since there is much use of the swastika in the Americas, it is, perhaps, possible that R1a bearers contacted ancient native Americans. What can DNA tell us?

One way to study the DNA record would be to look at unusual, "exotic" R1a haplotypes among Native Americans by testing ancient, excavated bones in America, in those regions

Figure 19.
Swastika on a scarf of a legendary Russian charac
ovich) from the 12th century CE. The cartoon was
the 19th century, or copied from an old picture. Swast
image in old Russia inherited from the Aryans on the

Figure 20.
Swastika in the Middle East, inherited from the A
4000 - 3500 ybp. A fraction of the R1a-L342.2 hap
subclade as that among the Hindu Indians, currently
the Arabs in the Middle East (Abu-Amero et al., 200

where the swastika was found. Unfortunately,
data. Another way is to 1) analyze the haplog
Americans (NA) who have had Y-chromosom
tify those who belong to haplogroup R1a, a
when their common R1a ancestor arrived in A
nately, relatively few Native Americans ha
chromosomes tested, and, as far as we know,
been tested for extended haplotypes.

Though native Americans have been teste
somal haplogroups and (short) haplotypes fa
than have Europeans, we know that the mo
logroup in NA is Q (Zegura et al., 2004; Bolr
Mahli et al., 2008; O'Rourke & Raff, 2010; Du
Haplogroups Q, R, and C, account for 95
American Y-chromosomes. In one study, 55
three main language groups—Eskimo-Aleut
Amerind—76% had haplogroup Q, 13% R, an
et al., 2004). In another study of 281 haplo
Americans in the Central and Eastern region
States (Bolnick et al., 2006)—where most o
swastikas have been found—45% had haplogr
8% C, and 16% "other". A haplotype tree f

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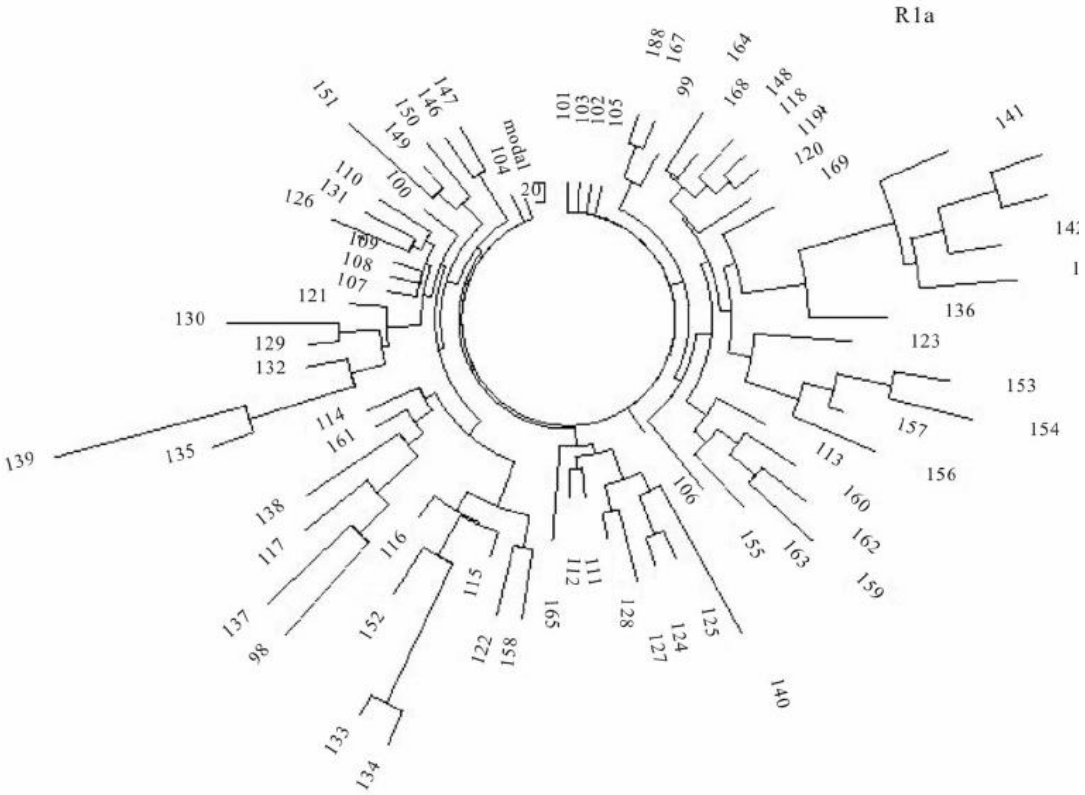

Figure 21.
A 10 marker haplotype tree of 72 Native Americans who belonged to the R1-M173 haplogroup (and/or any downs haplogriopus). The tree was composed from data in (Bolnick et al, 2006). A branch in the upper-right part belongs t haplogroup. Composition and analysis of haplotype trees is explained in (Klyosov, 2009b; Klyosov and Rozhanskii, 20

M173 haplotypes is shown in **Figure 21**. It should be noted that "R1" here means undifferentiated R1 (if any), R1a and R1b.

Since Bolnick et al. (2006) did not resolve the upstream haplogroup R1 into R1 itself, and sub-groups R1a, R1b, we had to rely on our phylogenetic program to resolve the tree into branches. Indeed, one branch in **Figure 21**, in the upper right side, has been identified as an R1a subgroup, with a distinct DYS392 = 11 (the penultimate allele below), such as in ## 141-144 in **Figure 21**:

13 25 16 10 11 13 X X 11 13 11 16
13 25 16 10 11 14 X X 10 13 11 17
13 25 16 10 11 14 X X 10 14 11 17
13 25 16 10 11 14 X X 11 14 11 17

The rest of haplogroups in the tree have DYS392 = 13 or 14 (as in #145 in the tree, along with many others), which might be either R1, or R1b, or an archaic R1a, with the age of a common ancestor 6000 years or more. Unfortunately, the problem cannot be resolved without a direct typing of Y-chromosomes to haplogroups and their subclades. In general, the overall shape of the tree indicates a highly heterogeneous origin of the haplotypes, which might certainly include men descended from ancient common ancestors who belonged to the R1 haplogroup with downstream subclades (including R1a) among native Americans.

We conclude that available data do not conflict with the hypothesis that there were some R1a bearers—unknown to us as yet—who arrived on the shores of the New World and brought with them ceramic designs and sacred symbols known in East Europe and South East Asia. This conjecture is supported to some degree by the DNA record available to us today. Although our hypothesis needs further testing, it i for explaining the remarkable similarities of widely spaced archeological sites.

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Figure 2(a):
http://www.flickriver.com/photos/mharrsch/360637566/ Ceramic Bowl Mogollon culture Mimbres people 1000-1150 CE New Mexico United States

Figure 2(b):
http://4cornershikesancients.blogspot.ru/2010/01/pottery-shards-on-trail.html

Figure 3:
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Figure 6(a):
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